



LAURA H. THIELEN  
CHAIRPERSON  
MEREDITH J. CHING  
JAMES A. FRAZIER  
NEAL S. FUJIWARA  
CHIYOME L. FUKINO, M.D.  
DONNA FAY K. KIYOSAKI, P.E.  
LAWRENCE H. MIKE, M.D., J.D.

KEN C. KAWAHARA, P.E.  
DEPUTY DIRECTOR

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
**COMMISSION ON WATER RESOURCE MANAGEMENT**  
P.O. BOX 621  
HONOLULU, HAWAII 96809

STAFF SUBMITTAL  
for the meeting of the  
COMMISSION ON WATER RESOURCE MANAGEMENT

April 16, 2008  
Honolulu, Hawaii

Application for a Stream Channel Alteration Permit (SCAP.1836.3)  
Stream Bank Lining on Waimanalo/Kahawai Stream  
Waimanalo, Oahu, TMK: (1) 4-1-023:065

APPLICANT:

Mr. Darrell Ing  
Department of Hawaiian Home Lands  
State of Hawaii  
1099 Alakea Street, Suite 1230  
Honolulu, HI 96813

LANDOWNER:

Same as applicant

SUMMARY OF REQUEST:

Application for a Stream Channel Alteration Permit (SCAP) to construct a streambank lining on Waimanalo/Kahawai Stream, Waimanalo, Oahu, TMK: (1) 4-1-023:065.

LOCATION: Exhibits 1a and 1b.

BACKGROUND:

On January 28, 2008, Akinaka & Associates, Ltd. submitted a SCAP application on behalf of the Department of Hawaiian Home Lands (DHHL). DHHL plans to build a new, 11.5 acre subdivision called Kumuhau to provide 52 single family lots for native Hawaiians. Construction activities include site preparation work for roadways, residential lots, utilities, and drainage improvements including a detention basin, drainage outlet, and overflow swale/chute on the west bank of Waimanalo/Kahawai Stream. A detention basin south of Kumuhau Subdivision will minimize surface runoff generated by the subdivision into Waimanalo Stream.

The project site is vacant farm land that is overgrown with trees, bushes and weeds. Existing adjacent land uses consist of agriculture and urban development. The Federal Emergency Management Agency

(FEMA) Flood Insurance Rate Map (FIRM) shows that the project site is predominantly in Zone X and partially in Zone AE.

#### DESCRIPTION:

A detention basin, approximately 220 feet by 120 feet (.61 acres), will be constructed to capture surface runoff from the new subdivision. A 24-inch, perforated drain pipe in the detention basin will connect to an 18-inch, reinforced-concrete pipe drain line whose outlet will be on the west bank of Waimanalo Stream. The stream bank will be lined with 10-foot wide by two-foot thick, grouted rip rap apron at the outlet location. In addition, a 10-foot wide weir on the top bank of the detention basin will channel overflow runoff to a 10-foot wide, grouted rip rap, drainage swale leading to a 10-foot wide, grouted rip rap apron on the west bank of Waimanalo Stream. Approximately 50 cubic yards of grouted rip rap will be used to construct the overflow swale and drainage aprons. See Exhibits 2, 3 and 4.

#### Best Management Practices (BMPs)

Erosion control measures for this project will include a permanent detention/silt basin, temporary silt fences, sandbags and/or temporary earth berms to prevent sediment and pollutants from entering into the stream, two grouted rip rap aprons on the stream bank, and revegetation of disturbed areas.

The sequence of construction activities will be:

- Install erosion control measures
- Clear and grub work limits
- Grade detention basin
- Grade project site
- Construct detention basin outlet pipe
- Construct detention basin overflow swale/chute

Work within the stream will be done during the dry summer period and be supervised to prevent construction debris from remaining in the stream area. Erosion control measures will be inspected periodically especially after heavy rains and will be repaired as necessary.

#### ANALYSIS:

On January 17, 2008, the City and County of Honolulu Department of Planning and Permitting (DPP) made the following comments:

- A Special Management Area (SMA) permit is not required.
- A grading permit will be required for the proposed work.
- Construction plans for the work should be submitted to DPP for approval.
- Issues relating to no-rise will be addressed during the construction plan review process.

The Division of Aquatic Resources (DAR) made the following comments:

- Kahawai Stream provides habitat for five species of native macrofauna and two native damselflies.
- The proposed construction is not expected to have any significant impact on the aquatic resource values in the area.
- Details on the capacity of the detention basin and the detention period need to be clarified in order to determine its impacts on aquatic resource values in the area.
- Detaining water for a period of time will create a health hazard by providing a habitat for breeding mosquitos.

The Engineering Division made the following comments:

- The project is located in Flood Zone X and AE according to the Flood Insurance Rate Map (FIRM).
- Developments within Zone AE are regulated by the National Flood Insurance Program (NFIP).
- This project site must comply with the rules and regulations of the NFIP.
- The applicant should include water demands and infrastructure required to meet project needs.
- Projects within State lands requiring water service from the Honolulu Board of Water Supply will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.
- The applicant should provide the water demands and calculations for the project to the Engineering Division so they can be included in the State Water Projects Plan Update.

The Office of Hawaiian Affairs (OHA) noted that detention basins can allow for filtration of non-point source pollutants prior to potential entrance into the public trust resource of Kahawai Stream and supported the concept of this project. OHA requested assurances that if iwi kupuna (ancient bones) or other cultural deposits are uncovered, work will stop and the applicant will contact the State Historic Preservation Division immediately.


State Parks and Forestry and Wildlife had no objections to the project. Land Division commented that the project was not subject to its regulatory permit or authority.

The U.S. Fish and Wildlife Service, University of Hawaii Environment Center, and Historic Preservation Division did not submit comments as of the date of preparation of this submittal.

RECOMMENDATION:

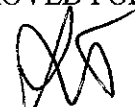
That the Commission approve a Stream Channel Alteration Permit to construct a streambank lining on Waimanalo/Kahawai Stream, Waimanalo, Oahu. The permit shall have a term of two (2) years subject to the Commission's standard permit conditions in Exhibit 5.

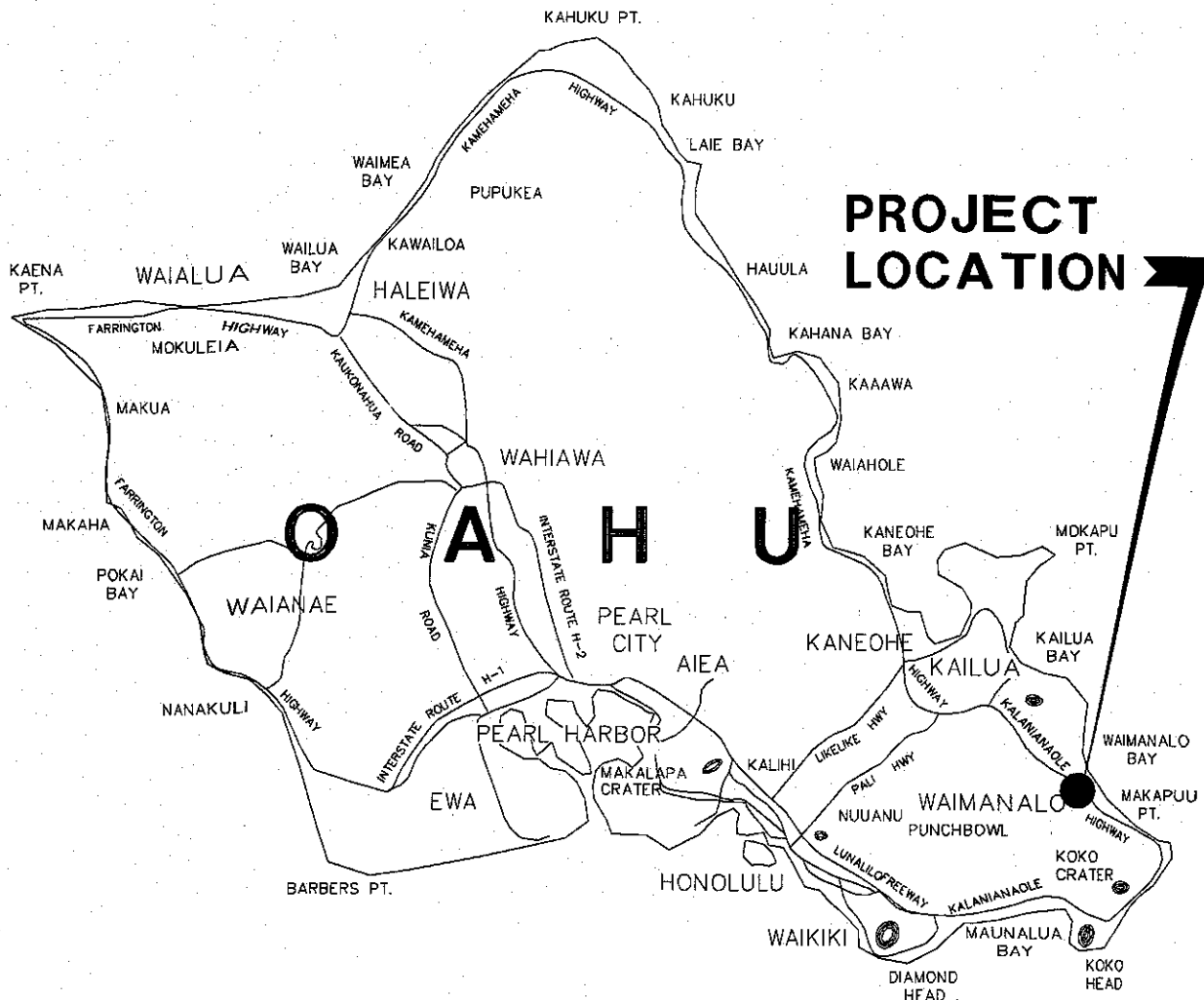
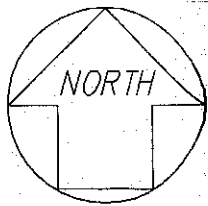
Respectfully submitted,

  
KEN C. KAWAHARA, P.E.  
Deputy Director

Exhibit(s):	1	Location Maps 1a and 1b
	2	Site Plan
	3	Drainage Details
	4	Photos of Project Site
	5	Standard Stream Channel Alteration Permit Conditions

APPROVED FOR SUBMITTAL

  
LAURA H. THIELEN  
Chairperson



DEPARTMENT OF HAWAIIAN HOME LANDS  
KUMUHAU SUBDIVISION  
VICINITY MAP

AKINAKA & ASSOCIATES, LTD.

SCALE: NOT TO SCALE

JANUARY 2008

EXHIBIT 1a

TRUE NORTH  
NOT TO SCALE

KALANIANA'OLE HIGHWAY

HIHIMANU STREET

POALIMA STREET

MEKIA STREET

KAHAWAI STREET

KAKAIA STREET

KQA MOALI PLACE

HUMUNUKI STREET

KUMUHAI STREET

WAIMANALO  
CORE  
DEVELOPMENT

OWNER: C&C  
OF HON.

OWNER: DHHL

OWNER: DHHL

OWNER: DHHL

OWNER: DHHL

PROJECT SITE  
"KUMUHAI  
SUBDIVISION"

TMK: 4-1-8:11  
OWNER: DHHL

TMK: 4-1-23:65  
OWNER: DHHL

TMK: 4-1-23:67  
OWNER: DLNR  
(KAHAWAI STREAM)

MAHAILUA STREET

DEPARTMENT OF HAWAIIAN HOME LANDS  
KUMUHAI SUBDIVISION

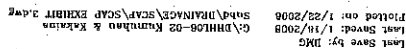
LOCATION MAP

SCALE: NOT TO SCALE

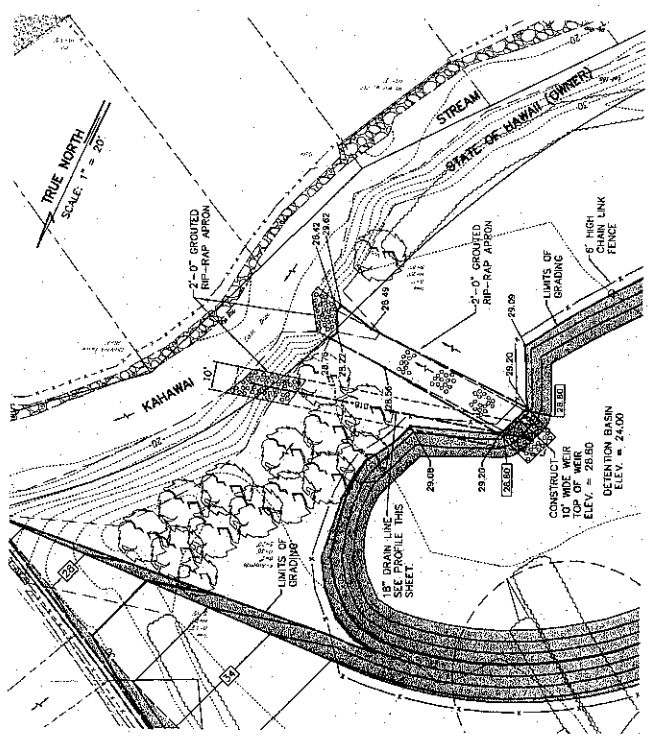
AKINAKA & ASSOCIATES, LTD.

EXHIBIT 1b

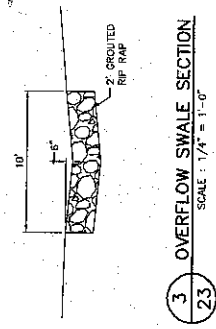
JANUARY 2008



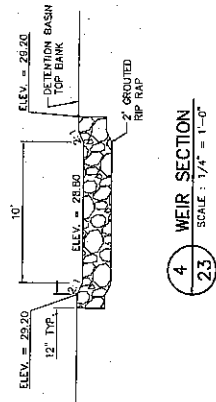
- LEGEND**
- LIMITS OF GRADING
  - EXISTING CONTOUR
  - FINISH CONTOUR
  - RUN-OFF FLOW DIRECTION
  - FINISH SPOT GRADES
  - EXISTING GRADES
  - LOT NUMBER
  - NEW 2:1 SLOPE
  - PROPERTY LINE



**1 WEIR DETAIL**  
SCALE: 1" = 20'

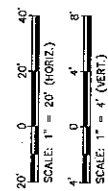
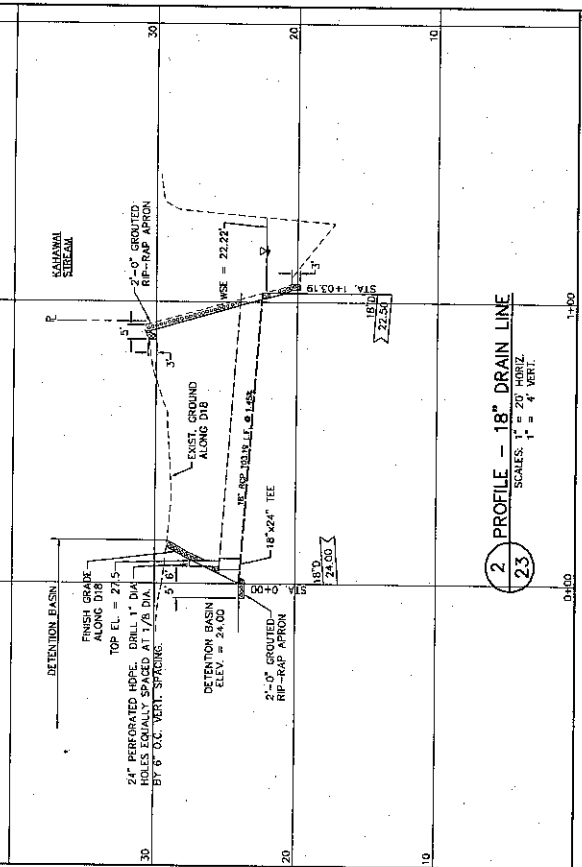


**3 OVERFLOW SWALE SECTION**  
SCALE: 1/4" = 1'-0"



**4 WEIR SECTION**  
SCALE: 1/4" = 1'-0"

**2 PROFILE - 18\"/>**



PROJECT NO.		SHEET NO.	
DATE		DATE	
DEPARTMENT OF HAWAIIAN HOME LANDS KUMUHOU SUBDIVISION MAP NO. 10 4-1-08-01 & 4-1-23-06 WAIMANALO, KOOAUPOKO, OAHU, HAWAII			
DRAINAGE DETAILS			
APPROVED:			
CHIEF, CIVIL ENGINEERING DIVISION HAWAIIAN HOME LANDS HONOLULU, HAWAII			
CHIEF, CIVIL ENGINEERING DIVISION HAWAIIAN HOME LANDS HONOLULU, HAWAII			
SHEET 23 OF 37 SHEETS			



EXISTING RUN-OFF

EXISTING RUN-OFF

PHOTOS SHOWING EXISTING CONDITION @ PROPOSED DETENSION  
BASIN OVERFLOW SWALE/CHUTE (AT TOP BANK OF STREAM)

DEPARTMENT OF HAWAIIAN HOME LANDS  
KUMUHOU SUBDIVISION

EXHIBIT 4

EXISTING RUN-OFF AT KAHAWAI STREAM BANK

SCALE: NOT TO SCALE

AKINAKA & ASSOCIATES, L.TD.

JANUARY 2008



EXHIBIT 4

IMPROVEMENTS AT KAHAWAI STREAM BANK

DEPARTMENT OF HAWAIIAN HOME LANDS  
KUMUHAU SUBDIVISION  
AKINAKA & ASSOCIATES, LTD.

SCALE: NOT TO SCALE

JANUARY 2008

STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS  
(Revised 9/19/07)

1. The permit application and staff submittal approved by the Commission at its meeting on April 16, 2008, shall be incorporated herein by reference.
2. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.
3. The applicant, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.
4. The applicant shall notify the Commission, by letter, of the actual dates of project initiation and completion. The applicant shall submit a set of as-built plans and photos of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.
5. Before proceeding with any work authorized by the Commission, the applicant shall submit one set of construction plans and specifications to determine consistency with the conditions of the permit and the declarations set forth in the permit application.
6. *The applicant shall develop site-specific, construction best management practices (BMPs) that are designed, implemented, operated, and maintained by the applicant and its contractor to properly isolate and confine construction activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting state waters. BMPs shall control erosion and dust during construction and schedule construction activities during periods of low stream flow.*
7. *The applicant shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The applicant shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.*
8. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.